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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,741	08/26/2003	Michael G. Ennis	SC-5298-CON II	2303

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EXAMINER	
DESTA, ELIAS	

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/647,741	ENNIS ET AL.	
	Examiner	Art Unit	
	Elias Desta	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) *1-6* is/are allowed.

6)☒ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 August 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Drawing

1. The drawings are objected to because of the following minor informalities:

- In Figs. 5 and 7: label 16 and 18 should be labeled as sources 1 and 2 respectively or delete source 1 and source 2 from Fig. 5, and replace them with '16' and '18' respectively. The labeling in Figs. 5 and 7 should be consistent. Appropriate correction is required.

Allowance

2. Claims 1-6 are allowed. The following is an examiner's statement of reasons for allowance:

In reference to claim 1: *Kelley, Jr.* teaches a method for detecting voltage disturbances in an alternating-current power system. (See *Kelley, Jr.* Fig. 1, and column 6, lines 25-67). The method includes:

- Inputting a signal representative of a voltage waveform applied to three channels where one of the channel having a square function and the other two channels having a zero cross detector (see *Kelley, Jr.*, Fig. 1);
- Initializing integration of the square function and the two delayed channel inputs and then determine the difference function to establish the half power function of the disturbance (see *Kelley, Jr.* Fig. 5); and

- Establishes a disturbance points as noted in Fig. 6

However, the method used in the claimed invention is fundamentally different from *Kelley, Jr.* The instant application first detects a disturbance signal when a deviation of the voltage waveform of the alternating current power system from the reference waveform exceeds a predetermined voltage threshold. Once the method establishes the deviation, then integration of the difference between the voltage waveform of the alternating-current power system and the reference waveform is carried out whenever the deviation of the detecting step exceeds the predetermined threshold. Then, the result of the integration step is compared to a predetermined threshold value in order to establish a particular voltage disturbance if the result exceeds a given predetermined threshold value.

Porter (U.S. Patent 5,943,246) teaches voltage detection of utility services disturbances. The method samples instantaneous values, squares the voltage values (i.e., eliminate or rectify the negative portion of the signal) runs a sum, and compares the sum with under and over voltage threshold values in order to generate a disturbance detection signal (see *Porter*, Fig. 4).

The prior art made of record and not relied upon is considered pertinent to applicant disclosure.

- *Forti et al.* (IEEE Article, 'Analysis of Errors in Transient Disturbance Measurements Using High-Pass Probes') teaches characterization of

measurement errors introduced by high-pass filtering offering a unified treatment that is valid for large number of different devices.

- *Muller et al.* (Electrotek, 'Detecting, Identifying and correcting Power Quality') teaches common method of summarizing power quality data over extended period of time.
- *Alegria et al.* (PG & E, 'Static Voltage Regulator (SVR) – Ride Through Support for Semiconductor Facilities') teaches the technology behind the SVR and summarizes expected and realized performance results.
- *Curt et al.* (U.S. Patent 6,360,177) teaches a voltage scanning, measurement, storage and reporting device.
- *Hu et al.* (U.S. Patent 6,081,768) teaches digital pick detector

The remaining claims 2-6 are dependent upon claim 1 and contain further limitations.

Conclusion

3. This application is in condition for allowance except for the following formal matters: see drawing objection as noted above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire TWO MONTHS from the mailing date of this letter.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elias Desta whose telephone number is (571)-272-2214. The examiner can normally be reached on M-Thu (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571)-272-2216. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)-272-1750.

Elias Desta
Examiner
Art Unit 2857

-ed

March 15, 2005

MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800